

Increase in Condom Sales following AIDS Education and Publicity, United States

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Abstract: Data from a national probability sample of drug stores show that condom sales rose from 240 million annually in 1986 to 299 million in 1988. The greatest increase occurred in 1987 after the Surgeon General's report on AIDS was released. Sales of latex condoms with spermicide rose 116 percent. Sales of other types of condoms increased less. These data suggest that Americans are using more condoms and probably more effective condoms in response to AIDS education. (Am J Public Health 1990; 80:607-608.)

Introduction

In his report on the acquired immunodeficiency syndrome (AIDS), the US Surgeon General advised persons whose sex partners may have been exposed to the AIDS virus to always use a condom during sexual intercourse.¹ An extensive public health campaign has since promoted condom use by persons who have sex outside of mutually monogamous relationships. Latex condoms, especially those containing spermicide, are believed to provide more protection than natural membrane condoms and have been the most highly recommended.²

Given the extensive public education effort and attendant publicity, we wondered if Americans were using more condoms. In a 1988 survey of urban teenage males, 58 percent reported using condoms during their last sexual encounter, compared to only 21 percent in 1979.³ We analyzed a more objective measure, condom sales trends, to see how they have changed during the HIV (human immunodeficiency virus) epidemic.

Methods

Drug stores condom sales were estimated from bi-monthly sales audits conducted by Nielson Marketing Research (Northbrook, IL). This national probability sample is stratified by size of store (four strata), geographic region (10 strata) and relative urbanization of the county where the store is located (four strata). Approximately 550 drug stores are audited, which compose 1 percent of drug stores and account for 2 percent of drug store sales. The same stores are audited every two months, making the system very sensitive to trends.

Condom sales in areas with a high incidence of AIDS were compared with sales in the remaining US. High incidence areas were defined as the television markets of the following metropolitan areas: Atlanta, Houston, Los Angeles, Miami-Fort Lauderdale, New York, San Francisco, and Washington, DC. These areas encompass one-fifth of the US

population, one-third of all condom sales, and two-thirds of all AIDS cases. To reduce the tendency of seasonal variations in sales to obscure short-term trends, we compared sales for each two-month period with sales in the same period a year earlier.

To gauge condom publicity over time, we counted monthly condom citations using three indices: Newspaper Abstracts (University Microfilms International, Inc., Ann Arbor, MI), National Newspaper Index and Magazine Index (both produced by Information Access Company, Foster City, CA). All three showed the same pattern; only Newspaper Abstracts data are shown.

Results

Drug store condom sales grew slowly from 1984 to 1988 except for a 20 percent increase between 1986 and 1987 (Table 1). Sales of some styles grew more rapidly than others. Between 1986 and 1988, sales of *all* latex condoms increased 25 percent (226.1 to 283.4 million). The biggest percentage growth was in latex condoms with spermicide which increased 116 percent (23.2 to 50.1 million). Latex condoms without spermicide increased 15 percent (202.9 to 233.3 million). Natural membrane condom sales increased 7.8 percent (14.4 to 15.6 million).

Sales increased both in areas with a high incidence of AIDS and in the remaining US between 1986 and 1988 (Figure 1). Sales in the high incidence areas were growing throughout 17 of the 18 two-month periods. In contrast, sales were not growing in the remaining US until the beginning of 1987, and sales stopped increasing in July-August 1988. In both areas, condom sales grew rapidly throughout 1987 and early 1988 following the release of the Surgeon General's report in November 1986. Media attention to condoms also increased. Condoms were rarely mentioned before the report, but were increasingly cited in articles, editorials, and cartoons thereafter, reaching a peak in February 1987, when 182 items appeared in the 19 newspapers indexed by Newspaper Abstracts. (Forty percent of the February items concerned the controversy over whether condom advertisements were appropriate for television.) Throughout the remainder of 1987

TABLE 1—Annual Condom Sales in US Drug Stores, 1985–88, and Percent Change from Previous Year

Year	Sales in Millions (% change)			
	Latex		Natural Membrane	Total
	With Spermicide	Without Spermicide		
1985	22.4 (*)	201.4 (*)	13.9 (*)	273.7 (0.6)
1986	23.2 (3.2)	202.9 (0.7)	14.4 (3.9)	240.5 (1.2)
1987	35.0 (50.9)	237.1 (16.9)	17.3 (19.8)	289.4 (20.3)
1988	50.1 (43.2)	233.3 (−1.6)	15.6 (−10.0)	298.9 (3.3)

*data not available

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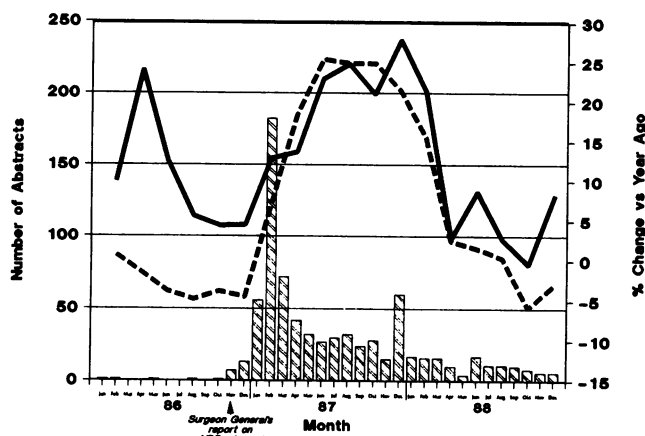


FIGURE 1—Annual Percentage Change in Condom Sales in Drug Stores in Seven Areas with High Incidence of AIDS (solid line) and remainder of United States (broken line) and Number of Newspaper Abstracts Mentioning Condoms (bars), 1986–88.

NOTE: Percent change in sales from the same period one year earlier are shown for two-month periods.

and 1988 media attention was greater than in 1986, but slowly diminished.

Discussion

The 20 percent increase in drug store condom sales in the year following the Surgeon General's report suggests that Americans responded to his message. In comparison, cigarette sales fell only 2.4 percent in the year following the Surgeon General's first report on smoking and health.⁴

The increase in sales was probably related to the recommendation that condoms be used to prevent HIV transmission. Sales of latex condoms, which were recommended for AIDS prevention, increased more than sales of natural membrane condoms. In addition, the greatest percent increase was in latex condoms with spermicide which cost more but may provide additional protection. The overall increase in drug store condom sales between 1984 and 1988 was 26 percent.

How much of the increase was for disease prevention? To answer this, we must estimate the proportion of condoms purchased primarily for contraception. According to studies of US women between 18 and 44 exposed to the risk of unintended pregnancy,⁶ 14 percent of married women relied on condoms in 1982, making up 73 percent of the condom users in this population; in 1987, the proportion of married women using condoms was almost unchanged at 15 percent, suggesting that married women choosing condoms are mainly concerned with contraception, not disease prevention. In contrast, the percentage of unmarried women choosing condoms increased from 9 percent in 1982 to 16 percent in

1987, probably reflecting concerns about disease.⁶ If all unmarried women choosing condoms do so for disease prevention, then there was a 78 percent increase in women using condoms for disease prevention.

How do sales compare with the number needed if all Americans who have intercourse outside of mutually monogamous relationships use condoms with every act of intercourse? Approximately 23 million Americans reported having more than one sex partner per year and 120 million reported a single sexual partner.⁵ However, we do not know how many relationships are mutually monogamous or how often any of these people have intercourse. This lack of knowledge of Americans' sexual activity make it impossible to estimate the number of condoms needed to protect Americans from AIDS.

Other studies have shown increases in self-reported condom use among particular groups. However, behavior self-reports may be more affected by educational messages than behavior itself. Although this study has the advantage of using an objective measure of behavior, we have no evidence that the condoms purchased are actually used. Furthermore, the sales data are from drug stores only; condoms sold elsewhere or distributed free-of-charge are not included. Also, sales data give no information on who buys condoms or why.

This nationwide study of condom purchasing and other repeated surveys of sexual behavior show encouraging trends. But some populations are not being reached adequately. Despite the increase in sales and reported use of condoms, syphilis rates increased 25 percent between 1986 and 1987, with urban areas having the highest rates.⁷ We need to learn how to increase the use of condoms among those who are at greatest risk of disease.

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